

AMATEUR CINE

W O R L D

SEPT.—NOV. 1943

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* * *

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* * *

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AMATEUR CINE

W O R L D

Incorporating "Miniature Camera World"

AUTUMN
SEPTEMBER, 1943—NOVEMBER, 1943
VOL. I. No. 12
(Old Series, Vol. IX, No. 9)

THE ONLY JOURNAL SOLELY DEVOTED TO SUBSTANDARD CINEMATOGRAPHY

AMATEUR CINE WORLD is published quarterly
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GORDON S. MALTHOUSE, Editor

High Purpose

NOW that we have seen the end of the beginning, and hopes mount high, it is natural that we should look soberly beyond the finish: to the time when "things return to normal." But we know that the "normal" of the years following the war will not be the "normal" of the nineteen twenties and thirties. The re-orientation of daily life and our outlook on it will affect every undertaking in work and leisure. And in both work and leisure the film will play a far more important part than ever it has done before.

A number of readers, both in the Services and in civil life, have been giving some thought to the film in its stellar role of the future, and are somewhat disquieted by what they think they see. Will the remarkable new equipment which is assuredly coming, evolved through constant research under the stimulus of war, take away some of the freshness and virtue of amateur cinematography? Shall we be dominated by the machine and, in particular, the sound machine?

Here is a letter which typifies many we have received:

As an amateur who entered the amateur cine field with aims higher than the production of moving snapshots of the kiddies and the annual holiday, it seems to me that the coming of sound, with its enormous advantages, may mean that the more ambitious workers in the silent film may be left out of it altogether.

What will be the position when things return to normal? The silent brigade are, and always will be, in the majority among amateurs. Only by joining a film-making society can an amateur get in direct touch with sound. There will doubtless be an enormous new public interested purely in projection—particularly sound. In this connection one may recall H. G. Wells's assertion during the production of "Things to Come" that, in the future, authors would not trouble to write books but would express themselves directly via the screen. Perhaps the day may not be so far distant when a sound projector will be as essential in the home as is the radio, and when one will obtain a film from the library as easily as one takes out a book today.

But all that belongs to the future. What we are concerned with is what is going to happen when film stock becomes available once more. It is up to you, Mr. Editor, to foster the silent film which, after all, will long be the medium used by the amateur.

Is there any reason why cine groups should not be formed, through which films could be passed round to members for criticism, on the model of the portfolio societies?

The writer, it will be noted, asserts that it is up to us to foster the silent film. But is it? The function of this magazine—a function in which it has been loyally assisted by its readers from the very beginning—is to foster the amateur film. So long as the amateur film remains silent it will find its voice in A.C.W. But should it burst into sound, then clearly its progress must be assisted by all the means in our power, just as was the rapid progress of the silent film before the war.

Are the *cognoscenti* of the silent field to become a filmic Pre-Raphaelite Brotherhood, drawing their inspiration from the past? That depends on the future—on whether sound ousts silence. It is probable that it will in time do so on the projection side. There have always been many more exhibitors of films than makers of films; the larger market should make possible lower prices and consequently still more sound projectors, until ultimately it might not be worth the manufacturer's while to produce silent machines for a dwindling minority. This may, or may not, be so. But whatever the developments in projection, one can be reasonably assured that there will always be a place for the silent film.

We do not affirm this merely because we, personally, have a horror of the situation envisaged by H. G. Wells when "authors would not trouble to write books . . ." Should that time ever arrive, and should a copy of A.C.W. chance to survive (perhaps wrapping up a box of concentrated three course dinner capsules), the curious reader may find in it material for ironic laughter at a bigotted reactionary of the dark ages. But a bigotry that affirms the simple pleasures and the flourishing of individuality has its points.

On the day that the Box Brownie arrives with attachments for making gramophone
(Continued on page 406)

THE WINTER ISSUE OF 'AMATEUR CINE WORLD' WILL BE ON SALE DEC. 1



FIG 1

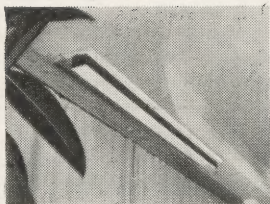


FIG 2

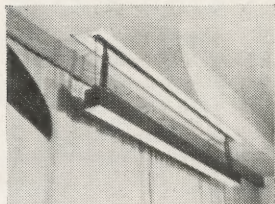


FIG 3

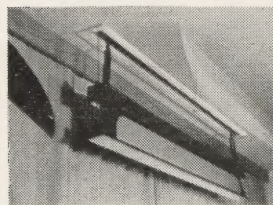


FIG 4

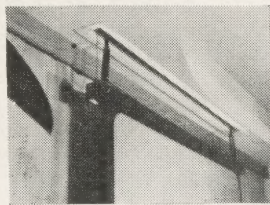


FIG 5

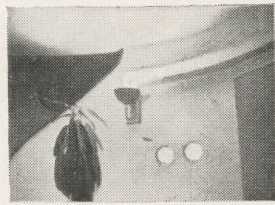


FIG 6



FIG 7

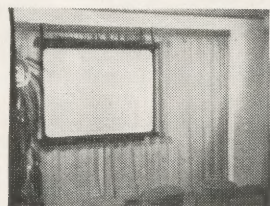


FIG 8

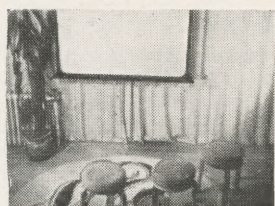


FIG 9

No Place Like the Home Cinema

TODAY the home cinema caters for larger audiences than ever before. In point of fact, it has escaped from the confines of the home and become a national institution. Yet the domestic theatre is the first love, and is likely to remain the last love of the amateur.

There is a great satisfaction in giving outside shows—and very generously has he responded to the heavy demands on his services—but there is even greater pleasure to be had from presenting films under conditions in which one has complete control of all the factors that make for effective showmanship.

The home cinemas illustrated in the following pages strikingly indicate how these conditions may be made to approach the ideal. Notably is this the case with the private theatre built by Mr. D. Shaw Ashton, photographs of which appear on this page.

The room is instantly convertible from its normal use to the projection of 16mm. films. The screen is contained in an oblong box

which fits flush into a recess in the underside of a circular lighting tray running around the room (Fig. 1).

This box descends on lazy tongs immediately in front of plain yellow curtains concealing a window running the full height and width of the room (Fig. 2). Strong springs assist in counterbalancing its weight (Fig. 3). The bottom of the box is hung from the screen roller and assists in keeping the screen taut (Fig. 4). The screen itself is lowered and raised by cords which wind around the ends of the roller, as it descends, in a reverse direction from the way the screen is rolled (Fig. 5). The complete device is operated from the projection box situated behind the glass-covered ports shown in Fig. 6. The loud speaker grill is seen (Fig. 7) above the screen and lighting tray.

A spot light illuminates the container from which the screen is to descend, the house lights dim out and, while the leader is

being projected, the screen descends and the spot dims out. The reverse takes place at the end of the showing (Fig. 8). Part of the room, which holds about 30 people, is shown in Fig. 9. (It is interesting to note, by the way, that each of these nine small photographs was taken with the single picture device of a Paillard-Bolex H16 camera.)

Another attractive home cinema, but of more orthodox design, is shown in Fig. 10, although it cannot be said to be entirely of "regular" pattern since its owner, Mr. A'Hern, is fortunate in being able to use two rooms for a show. A portable proscenium, with fading lights and draw curtains worked by an electric motor, is placed in position at one end of the room used as the auditorium. It is very similar to the one described fully by Mr. Gauld in the January, 1940 issue of A.C.W. A door is in the centre of the opposite wall, opening into the kitchen. The two top panels of this door have been removed and replaced by panels containing the four projection ports, two for the projectors and two for the operator(s).

Two Pathescope 200B Plus projectors, fitted with 40mm. lenses, are used, giving a picture approximately 2 ft. 8 ins. across, with a throw of 15 ft. This picture is quite large enough for an audience of about fourteen in a room of average size.

The projectors rest on a small hinged flap screwed behind the "projection room" door.

A table on the right of the door carries the switchboards and the gramophone. The latter is connected to the radio in the other room by flex concealed behind the picture rail.

The value of a projection room (says Mr. A'Hern) cannot be over-emphasised. It deadens projection noise, allows the operator to work in daylight or full artificial light, hides all the mechanics of the show from the audience, and leaves the operator free to surround himself with reels, wire and switchboards without the fear that someone will trip over the mains lead and slow up the proceedings. Lack of a projection room, however, need not deter

the serious amateur from using a proscenium or attempting some form of effective presentation. All that is required is a firm table, pilot lights for the switchboards and projectors, and a little care when arranging the apparatus so that the leads are not likely to wrap themselves round the feet of the audience.

Mr. A'Hern has constructed two switchboards—one for the projectors, and the other for the proscenium lights and curtains. Two projectors are used to give a continuous programme. It is, therefore, necessary that all projector controls should be grouped together to facilitate an instantaneous change-over. The former switchboard consists of a base, 16½ ins. long by 9¾ ins. wide, upon which are mounted the two 200B resistances. Fitted at one end is a sloping panel carrying seven switches: one for each projector motor, one for each lamp, one for the shaded pilot light, and two switches for cutting either or both of the resistances out of the lamp circuit when mains voltage lamps are used instead of the standard 110 volt lamps. (Fig. 11.)

A word of warning here! Should you attempt something similar, don't forget to fit cardboard shields over these two switches or otherwise render it impossible to close them by accident when the 110 volt lamps are in use.

There is an additional lead provided to enable a small movable pilot light to be used for threading the projectors when an "outside" show using a larger screen is being given. It is for such occasions that two switchboards were built instead of one complete one. The use of the large screen

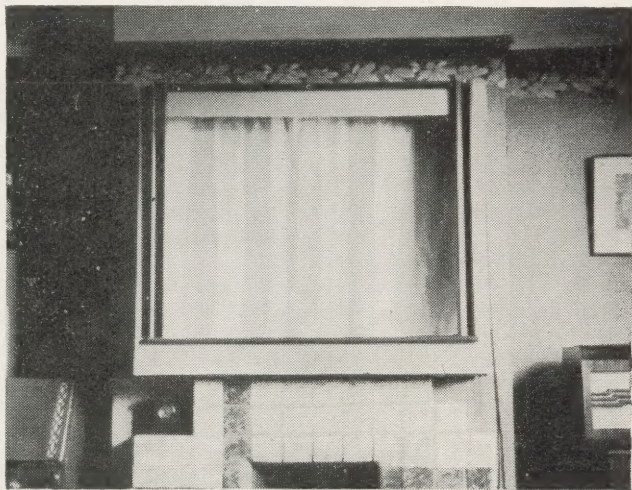


Fig. 10

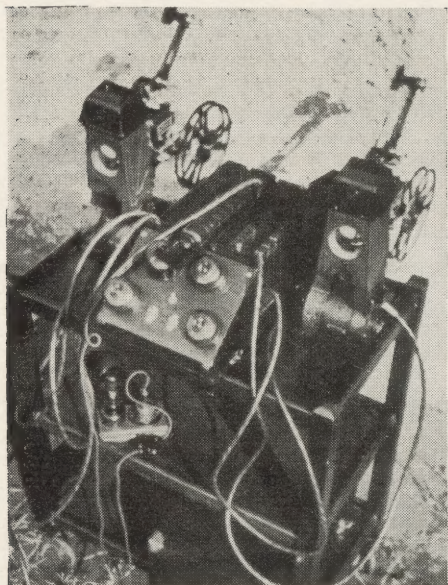


Fig. 11

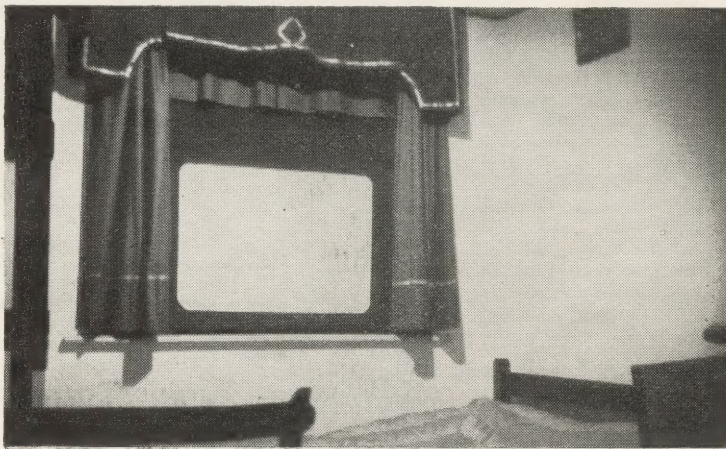
in a hall prohibits the use of the proscenium, and it is, therefore, left at home with its own switchboard.

For transport, the leads are strapped in a coil on top of the resistances and the lid dropped over and fastened by four suitcase clasps. The whole is covered with black leatherette cloth and finished off with a chromium handle and corner reinforcements.

The "effects" switchboard for the proscenium is similar in construction; it carries a resistance for dimming the footlights, a second resistance for dimming the "house" light curtain motor resistances and control switch, and plug-in sockets for the proscenium leads. There is also a spare socket for plugging in direct to the mains.

The resistances for dimming

Fig. 12



were wound on cardboard formers about $4\frac{1}{2}$ " in diameter. To start with, fourteen turns were given, and the end of the wire soldered to the first of a series of studs. The coil was then coated with shellac and insulated from the next coil by a sheet of brown paper bound tightly round and sealed with insulating tape.

This operation was repeated twenty-three times for each resistance, the wire at the end of each fourteen turns being taken to the next stud. These studs were arranged in a circle so that dimming could be achieved by a rotary contact arm. (The construction of various types of fixed or variable resistances has been dealt with fully in previous issues of A.C.W., and data for finding the correct amount of resistance wire required to dim any given number of lamps will be found on page 487 of the Feb., 1940 issue.)

A gramophone motor and turntable built into a home-made portable carrying case is used for music before the show, during the interval, or for providing a non-sync. accompaniment to films. A Cosmocord pick-up head was purchased for six shillings and fitted to the standard tone arm. This was wired, as previously mentioned, to the pick-up sockets of the radio by the side of the screen. The proscenium, switchboards, etc., can all be erected and wired up in half an hour, and dismantled in less.

As for expense, the leads were the most expensive item, since three core rubber power was used; it is strong, durable and proof against damage should it be trodden on. One is well advised to avoid the use of ordinary household lighting flex, as the thin cotton covering may easily be broken, with the possible result of a fuse or a shock for the person who handles the wire.

The total cost of the whole apparatus was

The war is rapidly reaching a critical stage when an all-out effort will be needed.

To keep our huge armies in the field an enormous amount of equipment is needed, and the production of tanks, aeroplanes, ships, guns, shells, bombs, must go on unceasingly.

Paper is needed in the manufacture of not a few of the munitions of war—the paper that YOU collect and hand over for salvage!

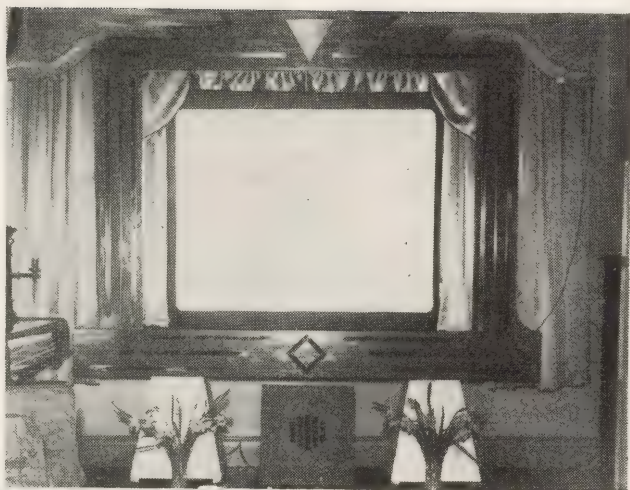


Fig. 13



Fig. 14

about £2 10s, money well spent, as the comments of the audience at the end of a show prove.

The Luftwaffe has not deterred Mr. V. J. Davis, who, having lost two home cinemas through twice being bombed out, promptly started on a third, and although he is now in the Services, he still runs shows whenever he gets leave. The "utility" bedroom model illustrated in Fig. 12, has a pleasing simplicity. And note the effective manner in which the screen itself serves to darken the room.

If one lacks the skill to build a home cinema for oneself, the next best thing is to have it built by somebody else. The handsome proscenium illustrated in Fig. 13 was built for a reader, Mr. M. Sharp, by Messrs. George Bernard & Co. It measures 8 ft. by 7 ft.; the woodwork is finished in green cellulose, and the strips on the sides, top

and stage are chromium-plated.

The light-green satin curtains are controlled from the projector by means of cords. There are eight coloured footlights, which are also operated from the projector. The stage is 20 in. from the floor to accommodate the amplifier.

In addition to road show units, there are

cinemas which are neither domestic nor mobile, but static theatres set up by enthusiasts in the Services for the entertainment of their comrades in off-the-map areas. One such, run by a reader, Mr. Norman Dyer, now serving in a Searchlight Battery, is shown in Fig. 14.

It is a somewhat derelict but most convenient barn, since, beside the main "auditorium" there is a separate little room at one end which has been transformed into quite a pukka operating box. Here were installed Mr. Dyer's own projector, a Bolex D.A. 37, and the non-synch. system, which consisted of a small battery amplifier and a clockwork turntable and pick-up of ancient vintage, connected to a similar loudspeaker at the other end of the auditorium, beside the screen.

The shows were opened to the villagers as well as the troops, and the children especially

NO PLACE LIKE THE HOME CINEMA

(Continued)

enjoyed them and were constant attenders. As there was no electric light supply anywhere near, the searchlight generating lorry was used as a source of power. The programmes were mostly drawn from the libraries, although one or two amateur productions were also shown and proved surprisingly popular.

Later, a Gebescope Model B talkie was bought out of Battery funds, and shows were given to all sorts of service audiences, but chiefly to outlying searchlight detachments.

Since there was only one projector, the reels had to be changed every 800 ft., gramophone records being played in the interval. In order to have the music ready the instant the reel ended, the operator would start the turntable at some noted point just before the end of the reel.

THE COMPLETE PROJECTIONIST

Third Edition. R. Howard Cricks, F.R.P.S. (Odhams Ltd. 7s. 6d. net.)

When "The Complete Projectionist" was first published in 1934, it immediately stepped into the position of a standard work, and has been the *vade mecum* of many hundreds of professional operators since that time.

This, the third edition, deals with the most recent technique and development, and is truly up to date.

Although the book is primarily intended for the professional worker it has the same interest for the amateur as is possessed, for example, by the latest Technicolor production for the Kodachrome worker, in that it deals with similar problems in a larger field and contains very many points which will give him a clearer vision of his own work. There is also a short section devoted entirely to sub-standard films and projection.

The book deals with the optical principles of projection, types of film track, the fundamentals of projection design, general electrical principles, and types of illuminant, including the tungsten filament lamp which is so much used in sub-standard projectors. Reference is made to the pressure discharge lamp and its possibilities for the future. Under sound and acoustics are many points of interest, and the chapter on the sound-head and its drive contains many details worthy of the attention of the experimenter. The principles of amplification are dealt with exhaustively, and some typical circuits are illustrated in large-scale prints. A significant development which is described is stereophony, a method which attempts to give better sound "presence" by stimulating the characteristics of the direction and distance of natural sound. The notes on projection room practice can be read with profit by all workers, while "Tracing Faults" is a valuable lesson in trouble hunting. Colour film methods are touched upon, while the chapter on Mobile Projection contains many words of wisdom. All the main types of sub-standard projectors are illustrated, and for those who wish to look into the future of entertainment there are sections on television, including large screen television, stereoscopic cinematography, non-intermittent projection, and other experimental divergences from normal practice. The book includes a series of useful appendices, the last of these being on simple first aid.

HIGH PURPOSE *Continued from page 401*

records of the subject photographed, the silent moving film will have become a museum curiosity. No! The movie-maker can cheerfully expect to go on making silent films of his family throughout his lifetime. But the amateur who enters "the cine field with aims higher than the production of moving snapshots of the kiddies and the annual holiday" is perhaps in rather a different case. The raw materials will be available for him to use, but he will be working in a commercially outmoded medium, for the 16mm. sound film will certainly dominate in the professional and commercial substandard sphere. On what, then, is he to base his art? On the past alone? That can be the only answer *unless* he makes his own future. And that, surely, is the *right* answer.

In the years after the war he alone will have the privilege and responsibility of nurturing a great art form—the art of the silent film. It is as if, in painting, oils alone made money for the artist, while water-colour was left to the dilettanti. The silent film, like the watercolour, can exist side by side with its brother, but only through the efforts of the amateur. On him devolves a high purpose—one which may give him a place in the chronicles of the arts. Inevitably he will have to experiment for himself.

The wisest will explore every avenue that promises aid in their labour of love. Our correspondent suggests cine groups "through which films could be passed round to members for criticism, on the model of photographic portfolio societies." But this is not a suggestion likely to find general favour. The amateur movie-maker does not care to risk damage to work that may well be irreplaceable, nor is it usually convenient to send out one's only copy of a film on a round that may eat into many weeks.

There remains the sensible alternative of membership of a society—a course, perhaps, which may not appeal to the lone worker who wishes to use the film less as an artistic medium than as a record, but which should commend itself to the enthusiast interested primarily in creating films.

He will need to acquaint himself with what may prove decisive advances in this field, if only because his work may suffer if he withdraws in aloof isolation. One feels safe in predicting two notable advances in amateur cinematography: the growth of the silent film and the birth of the sound film. In both there are opportunities for the accomplishment of great work; and protagonists of both can certainly look to a future—a near future, one hopes—of remarkable promise.

"DO IT YOURSELF!"

practical ideas for the handyman

THE "BROWNIE" TELEPHOTO

In each issue our contributor supplies worth-while ideas: things to make and things to do. Suggestions for gadgets are welcomed.

By G. A. GAULD, B.Sc

AS the subjects dealt with in this series are of a practical nature, I have endeavoured to keep faith with my readers by describing only such gadgets as I have made up and used myself. I hope I shall never be guilty of putting out an idea from the drawing board without making an experimental model at least. Experience has taught me that it is impossible to foresee all the snags, and these invariably develop during the actual construction of the job. Hence the need for making up the design before it is put out as a working proposition.

I have indulged in this preamble because I am now going to depart from my usual practice and describe a cine telephoto made from a box camera lens although I have not tried out the idea myself. But I do so with confidence because one of my readers has. Furthermore, this reader, Mr. L. Pegg, of 31, Albany Road, Chorlton, Manchester 21, offered his design for publication in these pages so that other readers may enjoy the benefit of his experiments. That, I think, was very sporting of him, and shows the co-operative spirit invariably found between amateurs bound by a common interest in their work.

Mr. Pegg's design is given in Fig. 1, and he adds: "The measurements are self explanatory, and anyone who has an old box camera and a friend who can operate a lathe can make it. The old camera I used was a Brownie, and the lens was set at $4\frac{3}{16}$ " from the negative. It was, therefore, set up in the telephoto mount at the same distance from the film in the movie camera gate. The mount was made from some discarded portions of a sound optical unit, the lens barrel being soldered to the screw thread attachment. A stop, $\frac{3}{8}$ " dia. was made and inserted, giving a working aperture of f.11. Also a 3 ft. supplementary lens was adapted to fit inside the hood. Care must be taken to have everything straight and true, and experiments made to compare the areas covered by the lens and viewfinder. If used on a suitable day, the results are quite good."

"If used on a suitable day." A moment's thought and that statement will remove all doubts as to why genuine telephoto lenses cannot be made for ten a penny. But, within limits, there is no reason why Mr.

Pegg's Brownie telephoto should not give perfectly satisfactory results, and a telephoto with limitations is far better than no telephoto at all.

When all is said and done, a telephoto is just a long focus lens, and this is a purely relative term. The ordinary lens for the Brownie camera had a focal length of $4\frac{3}{16}$ ". The equally ordinary lens for a 16 mm. camera has a focal length of 1"; both are "standard" lenses for their particular purposes. Yet, by fitting the "ordinary" Brownie lens to the cine camera, we will get "telephoto" results. Where then is the snag, and why do cine telephotos cost a lot of money?

The answer, I think, depends upon two factors, definition and working aperture. A cine film must stand up to a magnification of many hundreds of diameters and the degree of definition must be extremely high. To use the optician's expression, such lenses may be designed for a "Circle of Confusion" as small as $1/500$ th of an inch. To achieve this over the whole field and eliminate all errors calls for incredible accuracy both in design and manufacture, and such care is only justified because of the enormous magnification to which the image will be subjected. Although enlargements may be made from Brownie negatives, these will be limited to magnifications of only a few diameters. Consequently the lens need not be made to such fine limits and its price is kept within the limits demanded by the popular camera. Using the Brownie telephoto we shall not, therefore, expect to get results quite so critical as we should with a lens specially produced for the purpose.

Tied up with the question of definition is the other factor, the working aperture. We have become so used to "wide open" lenses for cine work that a working aperture of f.11 will at first seem very small. Relatively

speaking, it is. Nevertheless, as Mr. Pegg says, given a suitable day, the results will be satisfactory. We all know that a Brownie "snapshotter" will get excellent results on a sunny day at the seaside, better perhaps than he might with a more expensive and complicated camera with many more things to think about than the shutter button. In summer, on a sunny day, f.11 will give us anything we need, so that disposes of the limitations of the telephoto in that direction.

The less exacting definition is no great drawback either. The telephoto in the amateur camera is rarely used in its true sense to bring distant objects near. It is far more useful for the purpose of making undistorted close-ups, when the standard lens will give the star performer a large nose and small ears. For portrait purposes, a softening of the focus may be an asset, and will do no harm to an ultra close-up of a beautiful flower. Do not forget its additional advantage of reducing the background area by reason of its narrow angle of reception and its power of subduing the background because its depth of focus is much less than that of the standard lens.

The Brownie telephoto is a thoroughly workmanlike job and I have little to add to Mr. Pegg's design. I am afraid the "friend" who can operate a lathe is an essential to make the mount but he may be found in a garage or engineering shop, and will be a "dead cert" if there is a model engineering club in the district. The so-called standard lens mount for 16 mm. and 9.5 mm. cameras has 32 threads per inch, and the "back focus" is .690"—i.e., the distance from the back of the lens mount to the plane of the film emulsion. Whatever the fitting, the mount should be made to correspond with the mount used on the normal lens so that the telephoto may be interchangeable between any cameras using that particular fitting.

Mr. Pegg uses a supplementary lens for focussing near objects, but I think it might be worth while making the mount telescopic so that full focussing is obtained. Provided two lengths of tube can be obtained which will "telescope" into one another, a simple arrangement is shown in Fig. 2. It will be noted that Mr. Pegg's hood appears to be turned up in the lathe, so a possible alternative has been given in Fig. 2. The packing ring may be bent up from a flat strip and the whole sweated together with soft solder. The original lens mount may be made a tight push fit, using packing rings if necessary. The soldering iron or blowlamp must, of course, be applied *before* fitting the lens! The use of packing rings as shown for the hood is possible if the two tubes are not a telescopic fit.

The in and out movement is accomplished by a helical slot and stud and rotation of the hood end of the mount. The slot should be made first by drilling holes along the centre line, then opening out with a needle file (i.e., a file about $\frac{1}{8}$ " dia.). The stud is then made to fit and rivetted to the outer tube.

Dimensions will, of course, depend upon the lens used, and preliminary experiments will have to be made to determine them. Optical black should be applied to the inside and the outside as well. Mr. Pegg has a tip which I can recommend because I have tried this one. When dry, polish the outside with a soft duster. The matt, optical black will come up to a dull polish which gives a most professional finish.

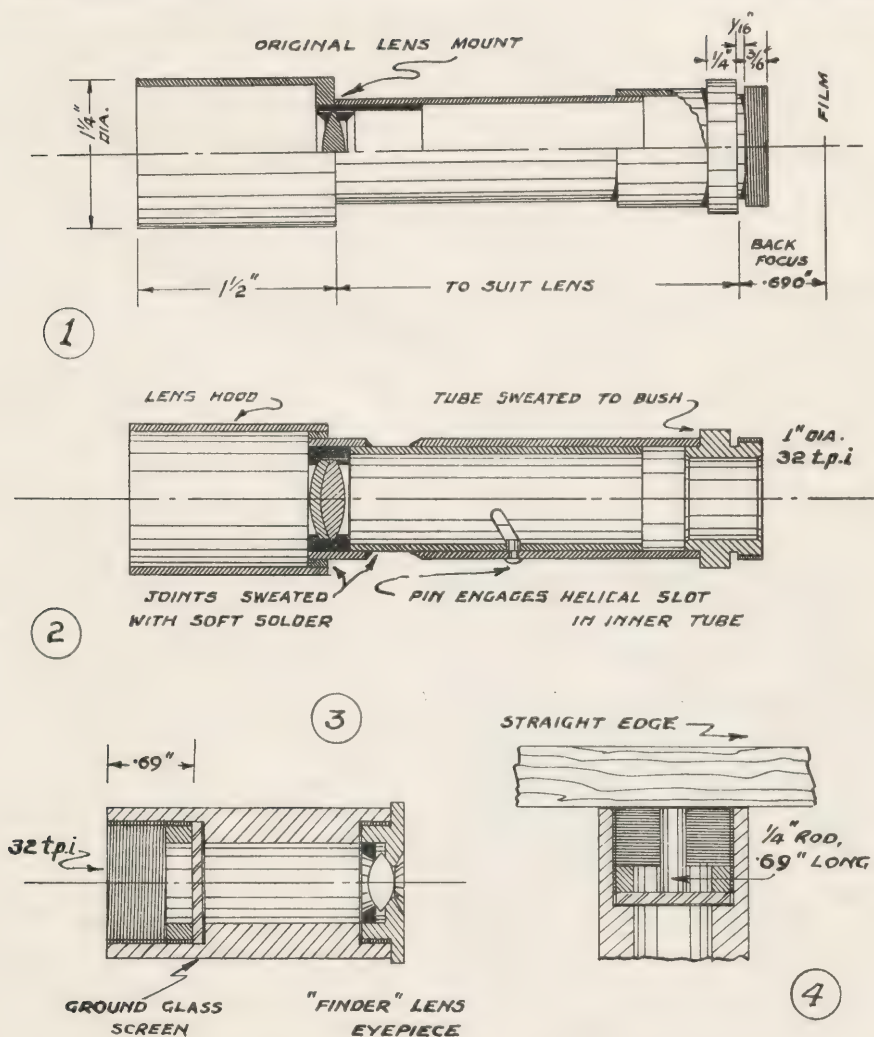
If the focussing mount is attempted, and if the "friend" is still in an obliging mood, its calibration can be carried out by the aid of another gadget which will be a most useful possession. The gadget is a focussing eyepiece and a design is shown in Fig. 3.

The body is turned in brass and one end made to correspond with the camera fitting so that the camera lens may be inserted. If it is "standard," the back focus will be .690" and, in forming the recess, this dimension with an allowance for the thickness of the ground glass screen will give the depth. A mask to correspond to the normal picture area can be added and the glass, obtainable from an optical dealer, is fixed in place by a locking ring, screwed externally to suit the internal thread in the socket of the lens holder.

As the "friend" is more than likely to own a calliper micrometer (depth gauges being less useful) a method of obtaining the exact back focus is shown in Fig. 4. A short length of rod is squared off in the lathe and carefully trimmed until it is exactly .690" long. The focussing eyepiece is then set up on end and, by means of the rod and a straight edge, is trimmed until the top of the rod and the face of the holder are in alignment.

Some sort of lens must be incorporated to magnify the image on the ground glass disc and one of the viewfinder lenses from a box camera, if fitted, will do admirably. Some preliminary experiments will have to be carried out to determine the best position for it in relation to the ground glass image. With this dimension fixed, a screw mount on the lines shown in Fig. 3 can be made, the lens cemented into place and the whole finished in optical black in the same way as the telephoto.

With the aid of this gadget, calibration of the telephoto will be easy, and it will be found to be extremely useful when critical work with the standard lens is undertaken.



In conclusion, in case some sky or sea shots call for the use of the telephoto, make one or two filters to fit inside the lens hood. These will serve the double purpose of filter and exposure reducer, as f.11 will be too

large an aperture for such shots on a sunny day. An iris diaphragm is out of the question, and a stop slide will only complicate the lens barrel. The filter is the easy way out and will be entirely satisfactory.

EXPOSING OUT-OF-DATE STOCK

Sir,—Referring to your reply to "D.A." in the June issue, it may possibly be of interest to him to know that last year I exposed some Pathe "S" film dating from 1939, and had no trouble at all. I gave an exposure only slightly more than normal, and in

one shot, in ordinary sunlight, I even had slight over-exposure at f/3.5. In the cases where I used a meter, I put the indicator back about 100. (AVO. H. & D. system). Kettering,

H. D. WILLIAMS,

M o t h e r

A CRITICAL COMMENTARY BY H. A. V. BULLEID, M.A.

FAMOUS LIBRARY FILMS. No. 20

Production .. Mejrabpom-Russ, Moscow, 1926.
Length .. 6,250 feet.
Directed by .. V. I. Pudovkin.
Scenario .. Natan Zarkhi.
Photography .. A. N. Golovnia.
Design .. S. V. Koslovski.
Montage .. V. I. Pudovkin.
Derivation .. Novel by Maxim Gorki.
Asst. Directors .. Mikhail Doller and V. I. Strauss.

The film first reached England in October, 1928, and was banned by the British Board of Film Censors.
 Production was from Autumn, 1925, till Summer, 1926.

The Players (* denotes Natural Types)—

The Father .. A. P. Tchistiakov.*
 The Mother .. Vera Baranovskaia.
 The Son .. Nikolai Batalov.
 Natasha .. Anna Zemtzova.
 Pavel (the Son's friend) Ivan Koval-

Samborski.

Strike-breaker .. Alexander Savitsky.*
 Officer leading Search-Party .. V. I. Pudovkin.
 Superior Officer .. Viacheslav Novikov.*
 Foreman .. M. M. Vidonov.
 Second Strike-bearer .. Sovrotchin.

Available on 6 reels, 16mm., from British Film Institute Library.

THE same uncontrolled praises, inaccurate claims, and political bias surrounded Pudovkin's film *Mother* as were noted in the case of *Potemkin*.

Approaching more warily, we have to record the general drab dreariness, the exaggerated characterisations (specially of the Boss Class), the tendency to run to length, and the over-emphasis of the symbolism: these are not necessarily the fault of the Director, who had to convey clearly a political message to audiences not very deeply educated, but they detract from the artistic significance of the film. On the other hand, the film is unique in its sustained lyrical beauty, its remarkable montage containing many passages never yet surpassed, its excellent and thoughtful photography which is so perfectly in sympathy with the direction, and its quite exceptional co-ordination of material. In no other film can be found so many brilliant touches linking characterisation and behaviour with such appropriate cinematic methods of portrayal. It is clear that the

material must have been set out in minute detail before production started, and it is a fact that Pudovkin spent several months on the montage. The extraordinary unity of purpose, and perfect welding together of the production phases, proves again the importance of the director having complete control.

V. I. Pudovkin, born in Penza in 1893, was educated in Moscow and met Kuleshov in 1920: seeing *Intolerance* changed his disinterest in Cinema to a very lively interest, and he joined the First State School of Cinematography. He acted, wrote, and assisted with directing till his first assignment, *The Mechanics of the Brain* (1925), a scientific documentary on Pavlov's work. During this production he wrote and directed *Chess Fever*, a topical 2-reel comedy on the 1925 International Chess Tournament, wherein José Capablanca appeared to play a part due to creative cutting in the Kuleshov tradition.

Then Pudovkin directed *Mother*, followed by *The End of St. Petersburg*. His first talkie was *Deserter* (1933). He is at present at the war-time film H.Q. at Alma-Ata, Central Asia. The reader is referred also to his wholly admirable book, "Film Technique," and his second work, "Film Acting." His thoughtful approach to Cinema: his research during 1920-1925: his interest in painting (which led to carefully studied photographic compositions such as the Prison Courtyard (reel 5) after Van Gogh): his scientific education: and above all his ability to learn from other films, and to develop principles of film technique started by D. W. Griffith and Eisenstein—all these factors contribute to make Pudovkin an outstanding creative director (but we wish he would make a more light-hearted film), and *Mother* is his most intimate and characteristic and perfect work.

(1) The film opens with a powerful shot of a soldier on guard, symbolising authority: the rest of the sequence is vague: a man ejected from a pub in the dark. The low tonal values are appropriate but too obscure, due to poor quality of prints.

(2) C.M.S. introduces the Mother, washing three pots simmer. The son sleeps in the background: C.M.S. introduces him. Poverty and squalor are suggested: there is no long shot. The father is introduced,

lurching through the night, recognised now from (1). A blunt M.S. shows him in the doorway. He looks at the clock—blurred, it comes into focus: MIX to C.S. an iron, doing service as a weight. The father takes and pockets it, then arranges a chair and climbs up to the clock. The Mother starts forward, restrains him . . . In Close-ups her hands seize his coat, the chair tilts, the clock is wrenched from the wall: they fall, the clock is smashed: one little gear wheel rolls on the floor, comes to rest. The man snarls with rage, he strikes . . . cut just before the blow to the son darting up from bed: the men grapple, the son is flung away, but seizes a hammer: high angle C.S. of him is finely contrasted with dramatic low-angle C.S. of the father. Then in C.S. his clenched fist relaxes, he turns away; and outside he stumbles off, pausing to look at the iron . . . While, in high-angle mid shot, the rough boards forming the entire background, the Mother collects the wheels of the smashed clock . . .

(3) Title IN THE PUB is followed by a good establishing long shot, then detail CM.S. of a band, consisting of three energetic accordion-players, each of whom then gets a C.S. (one is sweating, one winks, one is stolid). Close-ups of fish, a drunken head sprawled on a table, glasses of vodka held in shaking hands, are revoltingly explicit. Introduced by a title and C.S. a wad of notes, the Factory Foremen are at a table together, their leader speaks emphatically: a strike is threatened, it will be stopped . . . he smashes a bottle on the table (ruthless force will stop strike), the others munch fish, drink, in unconcerned agreement. Band plays on. The father lurches in, up to the barman, asks for vodka in exchange for the iron, gets threatening on being refused: but the foremen see a chance to use him so they supply vodka: and, amid money, drink and music (shown well in superimposed M.S.) he sells himself to them.

(4) Feet tramp through mud. It is a girl, with a parcel. She goes up to a window, taps: the son looks up . . . joins her: takes the parcel ("not safe at our place any longer"). He takes her hand for a moment: in a lovely full C.S. she looks after him, when he has gone: then herself hurries away. The son tip-toes in, hides parcel under a floor-board: but, drowsily (indicated by irised shot of varying focus), the Mother has seen. Slow fade-out. (End of reel 1.)

(5) Mist rises over still water, the early sun streams through. Fleecy clouds fill the sky, cock crows, blossom is on the trees. Two men join a group in a dell—the Strike Committee. Natasha says she too will go to the factory. The leader makes the key statement . . .

- (a) C.S. He speaks . . .
- (b) TITLE "Remember—"
- (c) CM.S. Some of the committee: they wait on his words . . .
- (d) C.S. (as a) he speaks . . .
- (e) TITLE ". . . at ten o'clock all the wheels will stop."
- (f) C.S. (as a) he finishes speaking.

The split title gives greater emphasis (the second part is awaited by the audience) and permits more rapid cutting, in keeping with the restless rhythm of the sequence. They all disperse, the men one way, Natasha the other.

(6) A complex series of mixes introduces the factory: steel girders, chimneys, cables, office buildings, merge one into the other in a horrid jumble, which the present writer cordially dislikes. A man pins a strike notice to a wall. Factory siren blows, men in the workers' tenements stagger up from their crude, tiered straw beds . . . The Mother is pouring cold water over the father's head, till he grabs the can and drinks (Still No. 1). One of the strike-breakers calls, says "Go quietly to your work."

(7) A high-angle general long shot,



A strong composition: one static moment during the chase of the strikers from the factory.

looking into the main gates of the factory and showing the gateman on his stool, and part of the shops within, is followed by C.S. of a weedy and ill-shaven young man, with shifty eyes. In a warehouse is a tough gang with sundry weapons: *Blacklegs*, reads the

A. P. Tchistiakov
as the Father.

title ; more correctly, *Strike-breakers*. The father is led in, one of them.

(8) TITLE : *The strike-breakers get ready* is followed by the long shot referred to above, but now the gang of strike-bearers are within the factory. One tells the gateman to go : he refuses, so the manager is sent for, to give the order. He has a brisk gait, and evokes much hat-doffing. In striding away he pauses, glances at his watch : getting out of the way of trouble is curiously implied. Two of the strike-breakers take up positions behind the massive gates. The main gang is dispersed to nearby shops, in the same long shot as (b) below. Then . . .

- (a) TITLE The trap.
- (b) L.S. A lad runs to the gate from outside,
- (c) C.M.S. whistles with two fingers in mouth, then yells
- (d) TITLE "They're coming out !"
- (e) C.S. Face sneaks round one of the gates.
- (f) L.S. (as b) Lad sprints like blazes to cover in one of the shops.
- (g) C.S. (as e) Face withdraws,
- (h) L.S. (as b) Strikers walk into factory : gates are slammed behind them.
- (i) M.S. They turn, puzzled.
- (j) TITLE "What's up ?"
- (k) C.S. Bolt is shot home.
- (l) L.S. They talk among themselves : from all directions the strike-breakers stroll up.

The wording of title (d) is obscure, as in fact the strikers are entering the factory. Then the foreman (strike-breaker) asks "Taking a holiday ?" and is knocked down : crisply cut blow, then a three-frame shot as he rolls on the ground. The son pushes to the fore, is seized, papers dragged from him (presumably strike notices) and scattered. His eyes meet his father's. Then, amid a hail of missiles, the strikers escape.

(9) The escape is concentrated on the son and one other man. Several long shots in corners of the factory show the pursuit, (Still No. 2), and they get over the wall :

but only after a struggle, for the father grabs the son's legs as he is getting over, but is kicked away. They rush into the pub. The son gets through, but the barman catches the other. The pursuers break in, the youth threatens with a gun but bottles are flung at him, and hands seize him from

behind . . . CUT to four serene shots of lofty trees, bright clouds, rippling water : the son runs on, alone : then back to the pub. . . the roughs move away, and we see the youth laid out, torn and bleeding : detail, jagged bottle in one hand. Another still figure is also on the floor : the father.

(10) At the striker's H.Q. the son explains his escape. Natasha is calmly seated. A man paces up and down behind . . . (End of reel 2).

(11) The Mother kneels praying. In getting up she dislodges the loose floor-board and, thinking back (the irised shot is repeated as a flash-back) she looks and finds the pistols. Feet approach . . . she hears and frantically re-wraps and conceals the guns in a fine fringed high-angle shot. Then we see struggling feet, and two other still feet, and realise what is the burden . . . They lay down the father's body . . .

(12) A drum is struck, feet and bayonets flash past, Title : LAW AND ORDER . . . the military enter the factory . . .

(13) A candle burns at the father's head : the Mother sits, watching, by the body. Two mourners pay their last respects. The Mother sits, expressionless. Left alone, she thinks about the guns. (A series of mixers).

(14) A comrade warns the son : "Get rid of the guns."

(15) Soldiers, led by an officer, set out—through mud . . .

(16) Still the Mother sits. The candle burns steadily. Water drips into a dish. In L.S. the door opens, the son enters ; realises ; sits down uneasily on his bed . . . "Who killed him ?" . . . "Your side." He lies by the still candle. The water drips. Both Mother and son think uneasily about the guns beneath the floor-boards : the C.S. of the loose board becomes fraught with tension. Then . . .

- (a) L.S. (Mother and father's body in background) Son goes to the loose board . . .
 (b) C.S. Mother exclaims in horror. MIX TO } total 17 frames.
 (c) C.S. The guns
 (d) C.S. Hands clutch at clothes 8 frames.
 (e) C.M.S. Father's body. 3 frames
 (f) C.M.S. Father's body (different angle) 5 frames.
 (g) C.S. The son. MIX TO
 (h) C.S. The Mother, moves forward . . . } total 22 frames.

and struggles with him in terror till a hand thumps on the door, a youth bursts in . . . laconically states "Soldiers." (Youth's name is Pavel; he can be distinguished shouting this name when the son cries "Who's there?" both being in C.S., without titles). Then, led by the strike-breaker previously associated with the father, soldiers march in followed by a mild officer (Pudovkin plus moustache). The candle-flame flickers by the father's head. In M.S. the Mother looks in horror. Officer carefully



V. I. Pudovkin as an officer.

wipes spectacles: sees body: they all uncover. One soldier belches, another fiddles with his belt. Tension is worked up in Close-ups of the Son, Pavel, the Mother, and the Officer (Still No. 3). No one replies to the demand to disclose the guns: the order is, "Search the house." Officer lights cigarette.

(17) Strike-breaker has gone to military H.Q., reports having found the son: factory owner and a superior officer are there: the latter decides to go and make an arrest—magnificently shown in detail C.S. of his hand reaching for gloves and hat . . . fade out.

(18) Search over, Officer throws away cigarette, all leave. Joyfully, the Mother bows them out. (Her expression would have given the game away even to a nit-wit stupid enough to overlook the obvious loose floor-board in searching the house!) Outside, they meet the superior Officer: all re-enter. Then, dramatic start to a magnificent sequence . . .

- (a) C.S. The Son and Pavel talk: Pavel smiles, then his smile freezes . . .

- (b) L.S. Soldiers enter.
 (c) C.M.S. The Mother, anxious.
 (d) C.S. (low angle) the new Officer (Pudovkin remains in background)
 (e) L.S. (as b) Officer points at the son . . .
 (f) C.S. arm swings up, pointing . . .
 (g) TITLE "Arrest him."
 (h) C.S. (as f) arm swings . . .
 (i) L.S. (as b) . . . down again: Mother rushes to son . . .
 (j) C.M.S. . . . up to Son, cries out . . .
 (k) TITLE "Why?"
 (l) C.M.S. (as j) she is terrified.
 (m) C.S. (low angle) the Officer replies. (Still No. 4)
 (n) TITLE "Because he hasn't given up the guns."
 (o) C.S. (as m) he says.
 (p) C.M.S. (as j) the Mother still hopelessly clings . . .
 (q) C.S. (hands only) . . . to the son, and they push away . . .
 (r) C.M.S. (as j) . . . a soldier.
 (s) M.S. The soldier is pushed away.
 (t) C.S. (low angle) Officer speaks, roughly.
 (u) L.S. (as b) more soldiers rush over to Mother and son.
 (v) C.S. (as t) Officer speaks roughly.
 (w) C.S. Hands roughly seize son.
 (x) C.S. Son, struggling.
 (y) M.S. Son, struggling.
 (z) L.S. (as b) Mother runs up to Officer
 (aa) C.S. (as d) he looks down at her
 (ab) C.S. She appeals
 (ac) TITLE "I will give you the guns if you let my son go free."
 (ad) C.S. Officer replies
 (ae) TITLE "Hand it over."
 (af) C.S. (as ad) he says.
 (ag) C.S. (as ab) she excitedly turns.

. . . but the son is filled with despair: and she gets the guns and hands them over and the son is rewarded by a blow across the face (a superb C.S. follows, his burning eyes biting into the camera, a trickle of blood from his mouth). Then both are dragged away, the Mother is left alone, prostrate with grief and despair. End of reel 3.

(19) MANY MONTHS LATER. THE TRIAL. These titles are followed by a shot of the wintry sun, then a series of mixes of the impressive masonry of the Court, admirably done, symbolising cold justice. A policeman is on guard. Escorted, the prison carriage drives up; the son and Pavel alight, the son smiles in the radiant sunlight, but he is jostled on, up the wide steps, inside.

(20) Early, the Mother sits miserably alone: but gradually the benches fill up. The solicitor and the prosecutor enter. Meanwhile the judge is robing, with slow elegance, while discussing horse-flesh with his debonaire fellow-justices. They enter the court, the prisoners are led into the dock, the judge sits with stern alertness. The charge is read at length. A woman in the court looks pleasurably round at the Mother, the prisoner, the judge, and revels in good justice, and remarks "He will certainly be sentenced." Justices look at watch, sketch horses. Solicitor hiccoughs, he is either

drunk or painfully nervous. Prosecutor declaims, pointing; camera set-ups include painting in background, indicating legal ancestry. Defending solicitor speaks haltingly, with nervous incompetence. After short recess, court return to pass sentence. Tension is worked up with intercut Close-ups. Natasha nervously fidgets. The sentence . . . PRISON. Vividly, in back-lit Close-up, the Mother cries out . . . Others quietly relax, the show being over.

(21) The Justices comment smilingly on the affair. There is a crowd outside, as the son is led down the wide steps: but the Mother bursts through, fights her way to him, crying . . . "Forgive me, my son." She is dragged away; he, pushed forward to the prison van.

(22) TITLE: *Natasha explains to the Mother.* This short sequence is done entirely in Close-ups . . . the girl's hands caress those of the Mother: the loose floor-board is used again to conceal papers: a hand-shake: a departure: another understanding holding of hands. End of reel 4.

(23) Prison is symbolised by one soldier on guard in a very strong low-angle picture, black against a clouded sky. A key is turned in a lock, the son emerges from gloom; by a grille the Mother sits waiting, she steals a glance at a note she holds crumpled in her hand. The son appears (in prison clothes hopelessly too big for him) and they meet at the grille. They stand very close. The warden dozes. The armed escort watches a beetle crawling out of a dish of food. They manage to touch hands, to pass the little note. The Mother smiles tremulously, "Forgive me, my son" . . . the son smiles, laughs, the Mother laughs in response. The guard laughs also, and pushes the beetle back into the food. The warden calls "Time's up." The son is led back. The mother half smiles, half cries (Pudovkin copying from Griffith's effect with Marsh and Gish).

(24) AND OUTSIDE . . . sparkling running water . . . SPRING . . . water, ducks, children at play. The Mother walks home. The son, cautiously lest he be observed through the spy-hole, reads the note . . . *The lamplighter will put a ladder against the wall. At 12 o'clock there will be a cab waiting at the corner.* The depicting of the son's joy at this note is remarkable.

- (a) C.S. his eyes. (9)
- (b) M.S. he sits in the dim cell. (32)
- (c) C.S. rushing water. (11)
- (d) C.S. rushing water. (12)
- (e) C.S. rushing water. (8)
- (f) C.S. rushing water. (6)
- (g) C.S. rushing water. (8)
- (h) C.S. rushing water. (13)
- (i) C.S. son's hand grips bench. (25)
- (j) C.S. his chest heaves. (37)

- (k) C.M.S. sparkling surface of rippled water. (39)
- (l) C.M.S. similar to (k). (14)
- (m) C.S. (low angle) a laughing child. (38)
- (n) C.M.S. (as k). (14)
- (o) C.M.S. (as l). (13)
- (p) C.S. (as m). (27)
- (q) C.M.S. a splash in the water. (33)
- (r) C.S. (as a) the son's eyes. (11)
- (s) C.S. sparkling water. (14)
- (t) M.S. (as b) he gets up . . . (16)
- (u) C.M.S. . . . to his feet. (13)
- (v) C.S. tin mug: his hand grabs it . . . (9)
- (w) C.S. . . . he swings it . . . (5)
- (x) C.S. (new angle) . . . swings it . . . (21)
- (y) C.S. . . . it bounces on the floor. (6)
- (z) C.M.S. . . . it bounces . . . (10)
- (aa) C.M.S. . . . it bounces again . . . (18). (cf. *Potemkin*, end of reel 1).

(Numerals in brackets denote number of frames in each shot.)

Then the warden looks up, but the son dances a jig in his exuberance.

(24) TITLE *In the common cell . . . one prisoner talks earnestly, others gradually crowd round to listen.* Intercut Close-ups of these men, admirably chosen types, show their thoughtful attitude. TITLE . . . *na svou práci . . .* (meaning . . . in his thoughts . . . One frame only occurs in the prints available, the poor, forlorn, un-redeemed flash title of the original imported negative!) The pastoral shots are good, not excellent: then comes a shot of ploughing, and a hand in C.S. crumbles the good brown earth . . . fade-out: the same hand belongs to one of the thoughtful prisoners. Then "to-morrow during exercise" is flashed amongst them . . . missiles are prepared . . . eyes watch furtively . . . tapping message, "TO-MORROW DURING EXERCISE."

(25) TITLE *In the factory . . . a group stand talking . . . TO-MORROW . . . the foreman sees, passes by.*

(26) TITLE . . . *and in the town.* Horse-carriage draws up, an officer alights, is ushered into the presence of his superior.

(27) Prison introductory shot is repeated (see 23). The son reads a new note, *Everything is ready for your escape. To-morrow you will be free again. They are coming from all parts of the town.*

(28) Long shots establish the frozen river and the factory. Men move in groups, enthusiastically. The idea "something's up" is strongly conveyed. From behind a pile of building material the foreman watches . . . The Mother chances to walk past a woman feeding her baby: she smiles "A son?", the other looks up with radiant pride, the child turns its head . . . "Yes, a son." Crowds walk in the streets of the town. The spring water runs . . . On the wide river the ice is breaking, the flocks moving slowly . . . The crowd proceeds, the Mother with them. The son climbs and looks out of the prison window: sparkling and swirling water, rapidly intercut in short flashes, vividly

express his turbulent joy.

(29) The bell is rung for exercise. At the corner, as arranged, Natasha waits with the cab. The son looks from the window : and sees in the distance (circular mask) the ladder being placed in position. The warden hammers at his cell door. Too late he obeys, drops down from the window : he is to lose his exercise . . .

(30) A superb (Lang-ish) long shot establishes the prison yard : the file of prisoners starts : cutting back to the long shot, they enter in the far background, the arrangement being of exquisite perfection. (The ice floes move on, the gathering crowd marches on, a lad smiles, waves, gets a cuff on the head from his Boss-class father). A message is brought in haste. The exercise continues, the men walking in a huge oval. Guards overlook the yard. A brick lying on the ground is gradually kicked into line by successive men, and finally picked up . . . End of reel 5.

Messenger enters, hands over note *Stop the break at once*, signed by Chief of Police. Crowds march along. Military H.Q. are informed. Bugle call is given. Soldiers double out, cavalry mount. Bridge spans the river : against its piers the ice floes slowly crumble. But the ice drifts inexorably on, and the crowd presses inexorably forward. The Mother is among them. The red flag is passed along to the front, held aloft. The ice sweeps on. The bridge spans the river. The exercise is stopped : but the missiles are ready, and when the protests from the prisoners are ignored, they let fly, and rush away in a mob. Those still inside the prison smash up furniture for weapons. The son desperately batters on his door. Many escape down the stairs. Outside they start to scale the gates, but the soldiers arrive, many are mown down (Still No. 5). More prisoners escape. The warden enters the son's cell, is hurled out and down into the well of the huge building. Flash-shots of rifles firing : more soldiers turn out : more prisoners pour down the stairs : at last some reach and climb the wall, the son among them. One reaches the cab and is whirled away. The son looks over the river



The stark reality of a prison-escape under fire : a corner of the prison yard . . . MOTHER by V. I. Pudovkin.

. . . the ice is breaking up . . . wardens appear with rifles . . . he dashes on, leaps from floe to floe as they fire on him. He is a tiny black speck on one small island of ice : but collapses, exhausted. The crowd marches on, flag flying. The ice floes are relentlessly split and broken at the pier of the bridge. The red flag flies bravely. The bridge. The ice piles up, the son clambers up. An order is given to the cavalry, they set off, advance across the bridge. (The stately direct angle is spoiled by a cut-in diagonal shot in which the girder-pattern obtrudes.) The son hurries to meet the crowd. He at once occupies the centre : but the Mother forces her way up to him, and locks her arms around him. The soldiers dismount, advance with their rifles : the crowd realises, in terror. The signal is given : a volley of fire : dashing feet : collapsing bodies : one desperate scream : and the son's eyes are closed, and he sags, and pulls down his mother on to him, and she cries out as she sees the blood on his forehead. And then she takes the flag from the mud, and stands erect, and holds it and keeps it flying : the cavalry charge, there is a storm of beating hooves, they charge right at her, she is trampled down . . . And in spacious long shot the crowd wildly disperse, and she lies alone in the mud by the flag.

The rhythm of this final episode is worked up to a fever of dramatic cutting at the moment of the charge. Tracking shots of the advancing horse are taken from on horseback,

terrific vigour being imparted by the impression of the spectator being actually amongst the riders.

(31) The film then ends with an epilogue (about 1½ minutes) of stately ramparts and towers, in elaborate mixes, leading up to a grandly impressive shot of the red flag flying from a domed tower: then C.S. of the flag, the shining sun immediately behind it . . . The End.

SCENARIO. Apart from its excellence in detail, the whole form of the scenario is a model of construction: Jay Leyda has pointed out that a sonata outline was consciously established, thus—sequences 1-10, *allegro*; 11-16, slow *adagio*; 17-23, *allegro*; 24-31, *presto* with *crescendo* to climax. This fundamental establishing of the tempo of the film contributes largely to the memorable rhythm of *Mother*.

TITLES. There are only 86, and the majority of these have less than four words. Pudovkin was conspicuously successful in avoiding the titling errors made by Griffith and Eisenstein.

DIRECTION. The response from the players, both actors and natural types; the obvious selection of the right material to afford film strips suitable for the already-planned montage; the general high plane of all production phases and absence of incongruities—these are the best tributes to the remarkably profound direction.

PHOTOGRAPHY. The Court-house exteriors were the first scene shot. The composition of the low angle shot of the Policeman is after "Bollo" by Velasquez. There is much subjective camera work, as in reel 5 when the mother talks to the woman feeding her baby. There are also very successful (directorial) effects as follows:—

- (a) "Camera as observer rather than mere spectator," e.g. camera on horseback in reel 6.
- (b) "Pictorial sense of smell," e.g., detail Close-ups in Pub, reel 1.
- (c) "Pictorial sense of feeling," e.g. son struck by Superior Officer, reel 3.
- (d) "Pictorial sense of sound," e.g. dripping of water, reel 3. (cf. icicle in *Pitz Palu*).

FILM CLASSICS

Sir,—As quite a newcomer to *A.C.W.* I feel I must draw your attention to a matter which makes me *boil*. Why devote so much of your very excellent magazine to a commentary on a film that is 16 years old, on "S" stock, and in such detail that I don't need to see the film? Having to share *A.C.W.* with several other amateur cinematographers, I can assure you that is the feeling in general. Let's have more "gen."

I wonder why the opening and closing titles of 9.5mm. library films are so standard and short. There is rarely a fade in and out—just a flash on the screen. It's like dashing into a book and violently snapping it shut.

In closing, I should like to thank you for your helpful articles on sound conversion.

P. J. ORAM.

Sir,—May I take this opportunity of saying how much I enjoy and appreciate *A.C.W.*, which I have taken regularly since 1936. Although so sadly reduced in size, it seems better than ever, and how I lap up "Famous Library Films"! I should like to see "The Chronicles of Grieshuus" deal with in this series, and some of the other early German films such as "Waxworks," "The Nibelungen Saga" and "Song" ("Show Life"—Pathoscope title). Easton-in-Gordam, Bristol. L. S. HARRIS (L/Sgt.).



A dynamic close-up: V. Novikov as the Superior Officer.

MONTAGE. "Expert cutting on human movement" . . . The tense turbulence of the latter half of sequence (2) is the best example.

"Associative editing of unrelated scenes" . . . The laughing child, swirling water, in quoted excerpt from reel 5.

"Linkage method of cutting" . . . Derived from Griffith, this is notable in the gathering of the crowds in reel 6.

There are also the remarkable "extraneous" shots, e.g., of serene trees, cut in at a moment of strife, giving a peculiarly strong sensation by contrast. Compare the still shots of sky in *Earth* by Dovzhenko (1928).

ACTING. Baranovskaia and Batalov were brought from the Moscow Art Theatre. Tchistiakov was a studio accountant. The Superior Officer was formerly a Tzarist Army Officer. Pudovkin always played a small role in his films.

GENERAL. The few examples quoted from this exceptionally perfect film will both guide the interested student of Cinema in looking for the many more contained in it, and also emphasise the remarkable brilliance of its director.

(You pays your sevenpence and gets Hobson's choice. But, in point of fact, Mr. Oram's letter is the first and only one of its kind we have received, whereas L/Sgt. Harris's is typical of a very large number, hence the reason we devote "so much" of *A.C.W.* to "Famous Library Films." But perhaps our first-named correspondent will be somewhat mollified to learn that we propose dealing with sound films as well as silent in the near future, while for Mr. Harris there is the promise that "The Chronicles of Grieshuus" (also asked for by other readers) will be included in the series.—EDITOR.)

A.C.W. OUT EAST.

Sir,—I should like to say how much the *A.C.W.* is appreciated out here. It is our only contact with our hobby and its arrival improves morale more than any ENSA show. The best of luck to *A.C.W.* B.N.A.F. DRIVER R. NEWPORT.

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TRACKING *it* DOWN

Secretary: C. LESLIE THOMSON, B.Sc.

Secretary's Report

First of all, a sincere and respectful apology to the designers and makers of fluid-flywheel scanners! In the last T.I.D. it was suggested that the main value of these was in reducing starting-strain, and thus allowing a heavier flywheel to be used. Mr. David Jones kindly wrote in and suggested that this effect could be much more simply obtained by the use of a small friction-clutch, adjusted to slip only during the heavier load of starting. This was so obviously sensible that it seemed there must be more to the fluid-flywheel than met the eye. Quite a heated discussion developed between members of the T.I.D. Board, and what we hope is the truth of the matter eventually emerged. (The makers of the item were, of course, fully aware of the facts all the time, but don't seem to have

taken any special pains to acquaint the layman therewith!)

The function of the mechanism is complex, despite the relatively simple construction, and there are a number of unexpected factors to be considered, but reducing the thing to its simplest terms, the situation is this:—

Any flywheel of definite mass has a natural periodicity, which varies with the tension applied—i.e., a flywheel being pulled round by film is liable to oscillate (move faster and slower with regular alternation) if any shock is imposed, and the tighter the film the higher the frequency of the oscillation. Shocks are provided mainly by the small "picking" pulses arising from the engagement or disengagement of the film perforations passing round the driving-sprockets. These shocks, being repeated, produce a series of oscillations in the movement of the flywheel, varying from one or two cycles per second to several hundreds.

At the lower frequencies, the oscillations are evident as "whip" of the film, and "wowing" of the sound. To check this, all machines with solid-flywheel scanners employ some form of impedance or drag ("frictional damping") to restrain the film. But the oscillations of the flywheel are not thereby removed—the frequency has only been raised. Added to this, the tension in the film is greater, and consequently the shocks are transmitted more strongly. There comes a point, then, where increasing the drag or friction, far from steadying the scanning, renders it much more rough, and simultaneously the oscillations are raised well into the audible range, so that intolerable mutilation of the higher notes occurs. The optimum degree of impedance is thus a point between two evils, and containing a proportion of each!

Now consider the fluid flywheel. It is made in two parts—a hollow outer shell rigidly connected to the scanning-drum shaft, and containing the very much heavier flywheel proper, which runs on a ball-race. The two are connected solely by the viscous

(Continued on page 420)

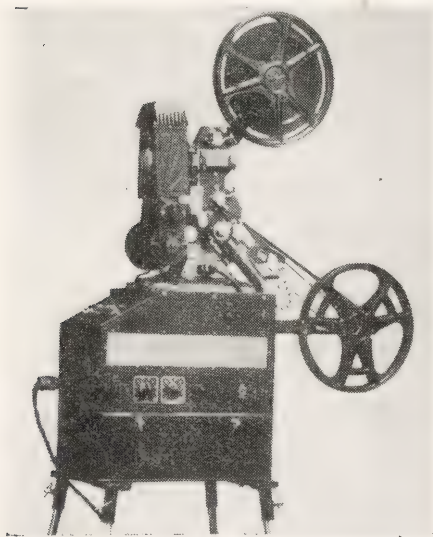


Fig. A. General view of Mr. Walter's 200B Conversion.

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drag of oil contained within the shell. Because of the different masses of the parts, and the non-rigid coupling, the flywheel as a whole may be considered to have no definite mass—from moment to moment—and thus cannot have a natural period of oscillation. Each part effectively damps the other. There is, therefore, no need to apply "restraint" in the form of friction or impedance, and consequently the tension in the film may be very low. Under these conditions the film is an excellent absorber of small shocks, practically none of which are transmitted to the scanning-drum, and even less to the scanning-point. The fluid-flywheel thus gives smoother and steadier scanning, and at the same time is much kinder to the film.

(In case any of the foregoing should scare an intending constructor away from the solid-flywheel rotating-drum scanner, it should be pointed out that with all its theoretical limitations, it is still the simplest method of obtaining a satisfactorily smooth scan—and that any rotating-drum scanner will give sound of markedly superior quality to that from a fixed scanning gate or drum, under similar circumstances. The frictional drag which is hurtful to smooth scanning is vastly more damaging in the absence of any form of flywheel at the scanning-point, as any experimenter can testify.)

Next, we have received from Mr. Walter details and photographs of a most professional-looking conversion of a Pathe 200B. As readers can see from the accompanying photograph, the outfit is substantial, and the description which Mr. Walter has prepared contains many useful and general pointers for the amateur conversionist. Interesting details of this conversion include forced cooling for the exciter (we can think of many machines which would benefit from this), an impedance sprocket preceding the scanner, and an entirely redesigned gate, to ensure film safety. These notes may be borrowed by any reader who provides the usual stamped envelope or label, and requests will be dealt with in rotation. The treatise by Messrs. Jenkins and Bradley on "Effective Presentation," mentioned in the previous T.I.D., is now available on the same terms. It deals with the problems which confront the sub-standard projectionist who wishes to make his show really worth-while. Many useful suggestions—all based on practical experience—are given, together with diagrams and descriptions of auditorium layout and projector position. (A gentle reminder to all borrowers of our "Notes": Please try to send these back within a reasonable period, and please don't trace diagrams in such a way as to disfigure the originals.

(Continued on page 422)

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We have even had Notes come back bearing instructions to some typist about preparing copies—a practice which would scarcely seem to be in line with the proper purpose—circulation amongst the amateur readers of A.C.W.) Questions on any sub-standard sound matter are, of course, always welcome—so long as you remember that S.A.E.! Enquiries by post-card are not "fair do."

Finally, the business of this meeting, which is concerned with a single subject—the Optical System. The notes which follow are necessarily restricted, but should prove a useful guide to experimenters—including those who have purchased an optical of doubtful pedigree, and are unable to discover just why it gives such poor results in their conversion.

The Optical System

To "read" the sound-track of a film, it is necessary to scan it with a beam of light of less thickness than the wavelength of the highest note to be reproduced. In sub-standard sound this top note is commonly accepted as 7,000 cycles per second, which with the standard speed of 24 frames per second ($7\frac{1}{4}$) means that each cycle occupies one thousandth of an inch ("mil."). To interpret this efficiently, the light-beam must be considerably less than one mil. in thickness (or "height") and the finer the beam the clearer the sound. In practice the fineness is limited by optical considerations, and the actual figure represents a balance between resolution and luminosity. In most cases the beam is about one half mil. (.0005") or slightly more, which figure gives a good response to the highest notes, and at the same time provides a reasonably intense beam, which in turn means a comfortably strong cell-signal. (One or two manufacturers, with an eye to the future, are producing systems with 0.3 mil. scanning.)

This scanning beam could be provided by placing a mechanical slit in actual contact with the film, and illuminating this with a simple condenser system. Such an arrangement has been used—mainly in early experimental work—but its disadvantage lies partly in the physical difficulty of providing an accurate slit of such dimensions, and mainly in the impossibility of keeping the aperture clean, as dust and dirt accumulate very rapidly, with fatal results to the sound, and seriously abrasive effects on the film.

Hence the necessity for the optical scanner, which allows the slit to be larger than the actual scanning beam, and does not require any frictional contact. Such scanners are of two main types—Projected Track and Projected Slit. In Projected Track ("P.T.") scanning, the moving track is thrown by a

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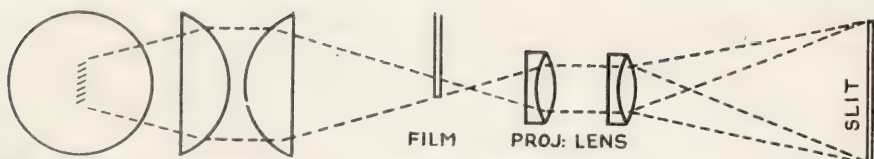


Fig. 1. Arrangement of elements for Projected Track scanning. Not to scale.

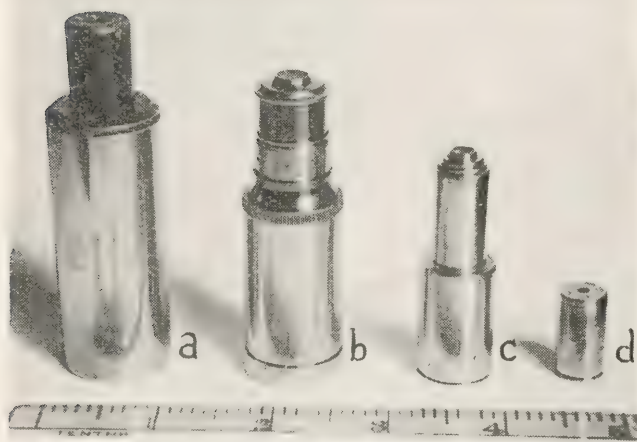


Fig. 2. Projected Slit optical systems, professional (a) & amateur (bcd).

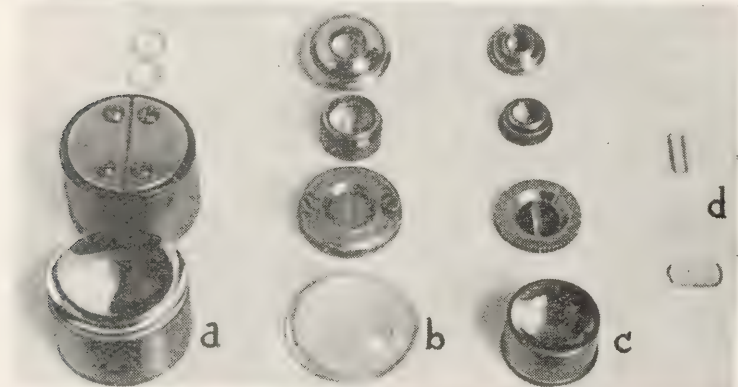


Fig. 3. Components of opticals shown in Fig. 2. Note very simple elements of cylindrical-lens type (d).

miniature "magic lantern" on to a slit, the size of which is proportional to the magnification of the image. E.g., if the track is enlarged ten diameters, the slit can be 5 or 6 mils. high, and proportionately wide. This system was one of the earliest used in professional apparatus, but in a very cumbersome form. It has since been reintroduced—"streamlined"—by a well-known concern. In the sub-standard field it has achieved considerable popularity amongst amateur constructors on account of its initial simplicity, and the ease with which the necessary adjustments can be made. Its main drawback

is its bulk, compared with the projected-slit system. Also, unless really rigid construction is used, there is great risk of projector vibration modulating the sound. (In professional heads a heavy and quite large cast-iron framework is used.)

In Fig. 1 a diagrammatic scheme of a typical P.T. system is given. The filament is focussed by the condenser at a point between film and lens, so as to illuminate the track with an intense patch of light, and to ensure that all the light enters the lens. The lens forms an image of the track across the slit, which is adjusted to give the correct

(Continued on page 426)

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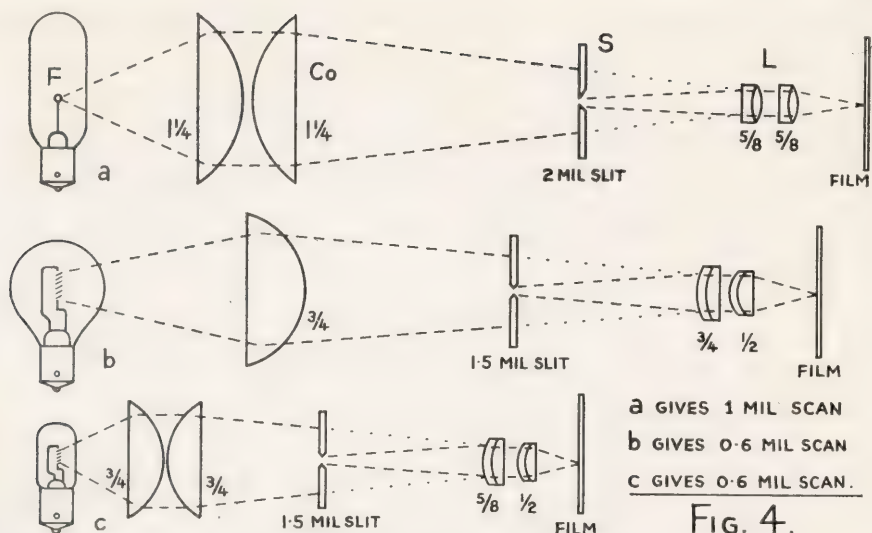


Fig. 4. Full-size diagram of opticals a, b & c. Figure beside each lens is focal length in inches. Exciters not to scale, and in all cases the filament is actually parallel with the slit.

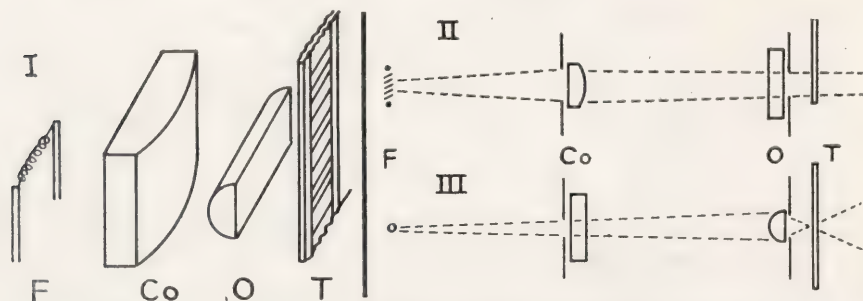


Fig. 5. I. Cylindrical-lens system, showing relationship of parts—Filament, Condenser, Objective and Track. II. Horizontal plan, $1\frac{1}{2}$ times full scale. III. Vertical plan. Note totally different treatment of beam in two planes, also masks applied to lenses.

height and width of scan. Beyond the slit it is usual to have a simple condenser lens to converge the light upon the cell cathode. (This condenser is only necessary if the width of the slit approaches the dimensions of the cell cathode, which might otherwise fail to receive all the light, and thus give defective scanning.)

Projected Slit scanning ("P.S.") is the more popular method, since it lends itself better to neat construction, and once adjusted requires little attention. In portable apparatus, the compact nature renders it more robust, and less likely to accidental derangement.

The claim that it gives a stronger cell signal from a given exciter has both theoretical and practical confirmation, and for the amateur this is a useful advantage as it means that less amplification is necessary.

In P.S. the original of the projected image may be either a strongly illuminated mechanical slit, or the actual filament of the exciter. In the latter case the exciter is of a special type, as we shall discuss later. The mechanical slit type is the more commonly used, and is very flexible in application. The filament-image type has the advantage of extreme compactness and few parts, coupled

with a good light-efficiency. But this apparent perfection and simplicity in turn demand extremely accurate calculation and adjustment, and a rigid standardisation of the components.

To deal first with the mechanical-slit type. The essential elements are shown in the photograph (Fig. 3) and the diagram (Fig. 4). They consist of a condenser system (Co.) to bring the filament-image to a focus in the lens (L), and a slit (S) formed by two knife-edges, which must be accurately parallel, and are usually adjustable to give the required gap. The calculation and selection of suitable units requires some thought, but the basic principles are simple. The condenser should be of such a focal length that with the exciter close behind the rear surface, the image of the filament is focussed on the lens. The slit must obviously lie entirely within the cone of rays thus formed, and is usually placed about mid-way between condenser and lens. The actual figure depends upon the lens used, and the degree of diminution required. The lens should be of short focal length—from one quarter to one third of an inch is common—so that the total dimensions are kept small. Since most of the values are interdependent, one must begin calculations from a given component. The lens is a suitable starting-point. Let us assume a lens of $\frac{1}{4}$ " focal length. With this one may obtain a 3:1 reduction with the slit one inch behind the lens-centre (node) and the image about one third of an inch in front of it. (The increase from $\frac{1}{4}$ " to $\frac{1}{2}$ " is analogous to "racking out" the lens of a camera for close-ups.)

Next, assuming that we wish the slit image to be 2 millimetres wide (for 16mm.), the actual slit must be 6mm. wide, and will require to be near enough the condenser to be contained comfortably in the cone of light. The position depends upon the diameter of the condenser, and here again we may be guided by custom, and assume a figure of $\frac{5}{8}$ ". A condenser of this diameter will give a disc of light fully 6mm. ($\frac{1}{4}$ ") across, at a point mid-way between its own centre and the focal-point. On the already established slit to lens distance, the condenser is thus fixed at 2" behind the lens, and 1" behind the slit. Next, we must know the diameter of the exciter-lamp bulb, to calculate the required focal-length of the condenser. A headlamp bulb is $1\frac{1}{2}$ " in diameter, the standard 32-watt exciter 1", and the standard 6-watt exciter under $\frac{3}{4}$ ". In this case we shall assume a standard 32-watt exciter, which, assuming a small space between lamp-bulb and condenser, will have the filament approximately 1" from the condenser centre. Since the condenser is to give not a parallel but a

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convergent beam, its focal length must be shorter than this—say $\frac{3}{4}$ ". We have thus determined skeleton figures for all the components. The exact measurements must be found by rigging up a miniature "optical bench," for which little blobs of plasticine on bits of cardboard form very handy supports. A flashlamp bulb is useful for measuring focal points, as the image of its filament is sharply defined, whether enlarged or diminished. From these figures the actual instrument is constructed.

As illustrative examples of these rules, the diagrams in Fig. 4 may be compared with the two photographs. The letters a, b and c apply to the same instruments in all three illustrations. It will be seen that b and c, which are intended for sub-standard film, both give a scan of 0.6 mil., and this figure is given by a $2\frac{1}{2}$ times reduction of a 1.5 mil. slit—a particularly handy size as this is the finest blade of most feeler-gauges. Optical "a" is meant for 35mm. film, and in the form shown is not suitable for sub-standard. By closing the slit, and reducing its width by a simple mask, to give an actual aperture of 1.2 mil. by 4 millimetres, a satisfactory, even if not elegant, instrument for 16mm. would result. For 9.5mm., the slit would have to be only half as broad, which would render the whole assembly even less efficient from the point of view of light intensity.

"b" is amateur-built, and is designed for use with a headlamp-bulb exciter. Since the diameter of a headlamp-bulb prevents the use of a short-focus condenser, a simple single lens is used. This condenser began life as the bulls-eye of a pocket torch, and being of cast glass had the inevitable dimple on the plano side. This dimple was removed by grinding the surface flat, then polishing it. (Perhaps a brief description of this process would be in order here :—The rough grinding was performed by rubbing the lens—held lightly in the fingers—on a piece of plate glass, using a mixture of emery and water as abrasive. When flat, the surface was smoothed with "flour" emery and water, also on the plate glass. Finally, polishing was carried out with ordinary metal-polish, but this time a piece of ebonite panel formed the support. The lens was carefully rinsed of all particles of abrasive between the steps, and light sweeping movements—combined with considerable patience—gave the desired result.)

The slit consists of two scraps of razor-blade (easily snapped to shape with pliers) clamped between a couple of washers, with 10 BA screws. The lens is a microscope objective having a focal length of $\frac{1}{4}$ inch (the nominal figure of "12mm." notwithstanding). Such lenses vary enormously in price, but the specimen shown cost 15/-.

"c" is also amateur-built, and is much more compact, being designed for a standard 6-watt exciter, and using the condenser from a Pathe "Home Movie" projector. The slit again consists of razor-blade scraps, but in this case they were sweated to the supporting ring in the correct adjustment. (Mica—split to the desired size—is a most useful ally in such jobs, as it is not affected by heat, and does not itself become soldered.) First one of the blades was soldered in position, then a film of mica—measured with a micrometer—was put in place, the second blade held firmly against it and soldered down. After making sure that the two blades were level and parallel, the mica was slipped out. The lens in this optical consists of two segments from an old-fashioned microscope. These segments can usually be picked up quite cheaply, and each consists of an achromatic lens in a little threaded collar. Each collar fits the next, and one may find as many as six segments on a microscope, with focal lengths varying between $\frac{1}{4}$ " and one inch. One may thus select two segments which combine to produce the desired focal length.

Lastly, we come to the image-of-filament systems, of which there are two kinds. The commoner uses semi-cylindrical lenses, which have the property of a short focal length in one plane, and no optical effect at all in another. In general terms, one may say that such a lens can reduce an image in one dimension, and yet maintain full size in another. Suppose that one wished to reduce a filament 10 mils. thick to an image 0.5 mils. high, the reduction would be 20:1. If at the same time the width of the image is to be one tenth of an inch wide, and normal spherical lens was used, the filament would have to be two inches long. But with a cylindrical lens the filament need be no longer than the final image. The arrangement is shown diagrammatically in Fig. 5, and a home-made version of the complete optical is shown in Fig. 4d. The light first passes through the lens Co, which converges the beam slightly in the horizontal plane, thus acting as a condenser. The beam then passes through the lens O, whose axis is at right angles to that of Co, and the beam is brought to a vertical focus on the track. (Due to the uncorrected nature of these lenses, the image is not quite so sharply defined as that given by achromatic spherical lenses, and consequently the amplifier following this type of optical is usually provided with a marked treble-lift characteristic.)

The lenses in the optical shown were made from glass rod and tube. The "condenser" from $\frac{1}{2}$ " thick-walled tube, and the

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Fixed Focus Camera.

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SMALL ADVERTISEMENTS

(Continued from page 432)

16mm. Cine Kodak, Model B.B. Junior, f/1.9 lens, leather case, good condition. £17 0 0d. "Ardmoniel," Rydens Avenue, Walton-on-Thames.

On sale Pathe Vox projector with two spare lamps and recently reconditioned. Price £90 15 0, lamps extra. Apply E. Parkinson, 11, Highfield Avenue, Preston Junction, Near Preston, Lancs.

Ball bearing talkie motor £4. "Navy in Wartime," 200 ft., 16 mm. silent unused £3 3 0. Green, 321, Kingsway, Dundee.

Paillard Bolex G.916, 500 watt, indistinguishable from new, overhauled by makers, complete with carrying case. What offers? Write P. H. G. Bagshaw, Great Oakley, Near Kettering.

Two professional 35mm. sound film projectors, complete with pre-stage and booster amplifiers, motors, transformers. Bulb Lighting (500 or 1,000 watts), 2,500 feet capacity. Machines in perfect working order, privately owned, luxury entertainment. Complete outfit cost over £1,000. Any interested person send offers to Box No. 634.

For Sale—Cine Kodak Special with spare 200 ft. film chamber and electric release control outfit. Price £400 or nearest offer. Box No. 637.

16mm. Kodak Cine camera, Model K, f/1.9 lens, leather carrying case, excellent condition. £30 or offers. Moir, 13, Rutland Square, Edinburgh.

Keystone type 8mm. cine camera, Meyer, f/1.5 plasmal, filter, brown hide case, £24. 2, Park Place, Cheltenham.

Emel Turret Camera C.85 2-5 lens, 1½ inch Dallmeyer Telephoto, hand crank, single speed £23. Blake, Regent Cinema, Leven, Fife.

For Sale. High output 5 valve amplifier with twin Rola speakers in Trix carrying cases. Two spare new valves. Input provision for two gramophones and one microphone. Suitable Works canteen or dance band. An electric gramophone with Rothermell crystal pick-up can be supplied if needed. Cost £55. What offers? Box No. 632.

"Universal" Film Cement, for all films, 9d. per oz. (Post 3d.) Supplied in plain bottle, or your own bottle filled. Enlargements from 9.5mm. and 16mm. frames 1/- each; tinted 1/9d. Todd's, Grange, Errol, Perthshire.

Wanted 16mm. Sound Projector. G.B. L.516 or similar, also 16mm. sound films, on technical (Aviation and Radio) subjects. H. Panagakis, "Lyngarth," School Lane, Aintree, Liverpool, 9.

objective from 1½" rod. The pieces were cut to size, then roughly shaped with a wet grindstone, turned slowly. The finishing of the plano surfaces was similar to that already described, and of course the convex surfaces were carefully preserved during all stages. Perspex—which can be purchased in small quantities in the form of "Spitfire Bracelets"—might be used to make similar lenses, as it can be cut, turned, and polished with great ease. This suggestion is for the experimentally-minded only!

As suggested previously, this type of optical is very exacting, with virtually no "depth of focus." So far as we know, only one type of lamp is available, having a very fine coil, accurately placed, although one might be able to select individual specimens of other types. Since the slit is an actual image of the filament, no irregularity or sag of the latter can be tolerated, and even a slight incline would be fatal. As a final point, the beam from this optical diverges very rapidly beyond the film, and a "strong" condenser is essential to converge it upon the cell.

The other image-of-filament system is rather more straightforward, but again the whole principle depends upon a very accurately made lamp. Its appearance is rather similar to a "festoon" bulb, and the filament consists of a single straight wire, only a few mils. thick. The requisite reduction is thus quite moderate, and the correct height to width ratio of the image is obtained with quite a short filament. A simple achromatic lens suffices to produce a sharp image, and the focussing tolerance is reasonable. For the amateur constructor, the snag is the special lamp, which, except for replacement purposes, is practically unobtainable at present. Also, the very close limits of its construction result in high manufacturing costs, so that its price is comparable with that of a small projection lamp.

Summarising the qualities, one might say that P.T. is simple to construct, but less efficient for amateur use than P.S., which has the advantage of compactness and reliability. The components for either of these are reasonably easy to obtain, and both are adaptable to a wide variety of conditions. Image-of-filament systems are not so suitable for amateur construction, as they depend upon special elements, and may also demand specialised design of the sound-head.

For the actual structure of the optical system, a simple tubular arrangement is usually preferred, the diameter being determined by one of the components—such as the condenser, or the thread of a microscope-objective. The adjustments of focussing

and "squaring-up" (azimuth) are made by moving the optical bodily in a simple clamp. Correct setting is found by gradually altering the position while running film through the machine, until maximum volume is obtained. For this to be reliable, one should use a loop of constant-frequency track, of a high note (about 5,000 C/S), but failing this, any film with fairly continuous and even sound may be used. One method of manipulating the optical may be described as a continual rocking combined with a slow progress. The rocking ensures that the azimuth is accurate while the focus is being found. Several manufacturers have produced opticals with a flat base, the slit being adjusted parallel with this at the factory, so that focussing is

simply a matter of sliding the optical back and forth—azimuth being maintained automatically.

(Cynical note: don't trust the maker's setting too implicitly, especially if the optical is second-hand!) If the optical is of such a design that it cannot be easily moved—e.g., with lug fixing—then the objective lens must be adjustable, and a simple threaded tube will serve as "micrometer focussing."

I.A.C. ACTIVITIES

The Institute of Amateur Cinematographers has issued a useful leaflet describing the wartime facilities it is able to offer. Chief of these is the library of more than eighty films, available to all members and affiliated societies at the rate of 2s. per title, irrespective of the number of reels.

Recent relaxation of restrictions on amateur cine film has enabled the Institute to resume the work of providing duplicates of outstanding amateur productions. Latest film to be copied is Marshall's "An Apple a Day" (reviewed some time ago in A.C.W.).

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CLASSIFIED ADVERTISEMENTS

Rates: For private adverts. 3d. per word (minimum 3/6); for Trade advertisements 6d. per word (minimum 6/-). Box number 6d. extra. All advertisements must be prepaid. The latest date for receiving small advertisements for the Dec. issue is Nov. 4th. Replies to Box Nos. to be addressed c/o "Amateur Cine World," 24, Store Street, London, W.C.1.

WANTED

9.5mm. sound films and 8mm. silent films required, best price paid for films in good condition. Gordon Lock, Chantry Lane, Grimsby, Lincs. Phone 55088.

Wanted 3" Bell-Howell incriminate projection lens; also 16mm. films. Good prices. Box No. 629.

Talking Projectors—two 16mm. required, perfect condition, for the British Red Cross and H.M. Forces. Excellent price offered. W. Oakes White, Torbay Court, Chelston Road, Torquay. Telephone Torquay 65202.

16mm. clamp type splicer wanted. Grower, Grosvenor Buildings, Seamoor Road, Bournemouth.

16mm. short 100ft. Mickey Mouse, Donald Duck, Pluto, wanted. Grower, Grosvenor Buildings, Seamoor Road, Bournemouth.

16mm. cine film wanted. Urgent. Please help. Helen Seifert, 22, Pinewood Avenue, Bournemouth, N.

Wide Angle 15mm. f/2.7 Telephoto 2", 3", 4", suitable for Kodak 16mm. Model E. Beach, 63, Melrose Avenue, Sutton Coldfield, Warwicks.

Wanted 50mm. or 2 in. f/3.5 telephoto lens for Emel. Dryhurst, Ladywood Road, P.O. Birmingham 16.

Wanted 8-16 Ditmar Duo projector. Must be in good condition. Full particulars to Hill, 3, Crow Lane, Chesterfield.

Castle 16mm. sound films wanted, approval against cash required. Paterson, 22, Doonfoot Road, Ayr.

Private buyer requires 16mm. talkie outfit urgently for work of highest national importance. Bell Howell, Bolex, or other first class make. Willing to part exchange Bolex G.916 silent. State full details and price. P. H. G. Bagshaw, Great Oakley, Near Kettering.

Wanted. Books on 16mm. Sound Projection, Cinematography 9.5mm. films. Dacombe, Rufus Cottage, Chandlersford, Hants.

Carrying case wanted for 8mm. Bolex Cine Camera, price and condition to Wingate, Glenmar, Dumbarton.

Wanted to purchase Bolex G.916. Projector with Bolex Sound Unit—or would purchase separately. Must be in first class condition. For private use. Mr. Walter, 61, Lant St., S.E.1. Tel. Hop. 3651.

Leica IIIB Outfit required. Filmsound 138C with many spares and accessories, comprehensive Magazine Cine-Kodak outfit and new Film 8 projector offered in exchange. Cash adjustment. Box 631.

Bolex H 8mm. Camera. Wizard ½" Classic Title Letters. Private purchaser. Ide, 2, Park Place, Cheltenham.

Wanted small library of 8mm. films in first rate condition. Send titles, condition and prices required to Box No. 639.

Bell and Howell Talkie (or other good make) urgently required by cash purchaser. Highest market value paid. Please give full details and price required. Box No. 640.

16mm. films, sound and silent, wanted. Must be in good condition. State prices. Box No. 641.

16mm. projector, suitable for A.C. current required. Details of offers, and where to be seen to Box No. 643.

Cine Kodak Special required by firm on war-work. Details to Scholefield, Box No. 267.

Advertisers will purchase Sound Films in good condition. Variety, Views and Interest films. No war films. Box No. 638.

Leica, Exakta or similar camera required for cash, or would exchange for Robot 2.8 and 5.5 tele. Particulars to Box No. 636.

Ampro 16mm. sound film projector, any size, working order or damaged machine. Give full details, also price, to Box No. 635.

Wanted for 70D. Bell and Howell, turret head 16mm. camera, 1-15mm. and 4 in. telephoto lenses. Box No. 633.

Coronet or Dekko sprocket feed projector wanted cheap. Inshaw, 8, Corrie Croft, Sheldon, Birmingham.

FOR SALE

16mm. sound films for sale. A small private library in excellent condition. All S.M.P.E. Standard. Box No. 642.

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Projector, silent, Bolex G.3 as new with resistance, accessories complete. Offers wanted. Box 630.

(Continued on page 430)

HELIOS ANNOUNCEMENT

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We are now booking films for Christmas, if you require a programme please book as early as possible—Last year we were completely booked up by 10th December. Films booked for Xmas will be posted by us on the 16th to 18th Dec., and are returnable on the 28th December, the hire charge for this period is 2/6 per reel plus postage. (Minimum four reels).

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